

REMARKS

Claims 1, 2 and 4-6 are pending in this application. By this Supplemental Response, Applicants respectfully submit additional comparative data in a Rule 132 Declaration and provide the following remarks. In view of the following remarks, reconsideration and allowance are respectfully requested.

Claims 1-24 stand rejected under 35 U.S.C. §103(a) over any of U.S. Patent No. 5,879,790 to Sogabe et al. ("Sogabe"), U.S. Patent No. 5,837,382 to Hiyashi et al. ("Hiyashi"), or U.S. Patent No. 6,210,794 to Nakamura ("Nakamura"). The Office Action asserts that the claimed recording medium, having a peel layer and ink layer as claimed, involved experimental modification and mere optimization of the operating conditions of these references. The Office Action requested additional evidence of unexpected results from the claimed recording medium.

The data in the Rule 132 Declaration, submitted herewith, shows that a recording medium within the scope of the claims has superior properties to anything taught or suggested in the prior art. Specifically, Comparative Examples 5-10 demonstrate that recording media with an ink layer having a styrene resin/binder component ratio of greater than 50/50 produced poor results when evaluated for applicability to non-coated paper, sharpness and rub resistance. Conversely, Examples 9 and 10 demonstrate that recording media having a peel layer that includes candelilla wax and an ink layer that includes styrene resin and a binder component including ethylene-vinyl acetate copolymer, wherein the weight ratio of the styrene resin to the binder component ranges up to 50/50, had clear printing qualities and excellent image sharpness at even the maximum printing speed (12 ips). The cited references do not teach or suggest that the claimed combination of components would produce these superior results.

For at least this reason, as well as the reasons set forth in the October 3, 2003 Amendment, Sogabe, Hiyashi and Nakamura, alone or in any combination, would not have rendered obvious the claimed thermal transfer recoding medium. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2 and 4-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Declaration Under 37 C.F.R. §1.132

Date: January 16, 2004

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Toshimichi HARADA et al.

Group Art Unit: 1774

Application No.: 09/610,305

Examiner: K. Nguyen

Filed: July 5, 2000

Docket No.: 106656

For: THERMAL TRANSFER RECORDING MEDIA

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DECLARATION UNDER 37 C.F.R. §1.132

I, Toshimichi HARADA, a citizen of Japan, hereby declare and state:

1. I have a Bachelor's Degree in Physics which was conferred upon me by Tohoku Gakuin University in Miyagi, Japan, in 1993.
2. I have been employed by Sony Chemicals Corp. since 1993 and I have had a total of 10 years of work and research experience in the Research & Development Department, Media & Chemical Division.
3. I and/or those under my direct supervision and control have conducted the following tests:

Thermal transfer recording medium were formed as detailed in the original specification of the above-identified application at pages 9-15. The heat resistant lubricating layer composition and the peel layer forming composition were prepared as detailed at page 9. The ink layer forming composition was prepared as detailed at page 10.

The ink layer in Comparative Examples 5-9 (denoted as C.Ex. 5-9 in the following Table) and Examples 9-10 (denoted as Ex. 9-10 in the following Table) used FTR 8100 styrene resin, with or without additional MB11, KE10 or KC10 binder component, at a styrene resin binder component weight ratio of 100/0, 70/30 and 50/50.

The thermal transfer recording media were evaluated as detailed in the specification at pages 13-15. The following Table summarizes the results.

Table

	Ink layer			Peel layer component	8 ips			12 ips		
	Component				Applicability to non-coated paper	Sharpness	Rub resistance	Applicability to non-coated paper	Sharpness	Rub resistance
	Styrene resin	Binder	Ratio							
C.Ex 5 C.Ex 6	FTR8100	MB11	100/0 70/30	Candelilla wax	X O	X A	A O	X A	X X	X A
Ex 9 C.Ex 7 C.Ex 8	FTR8100	KE10	50/50 100/0 70/30	Candelilla wax	O X A	O X A	O A O	O X X	A X A	O X A
Ex 10 C.Ex 9 C.Ex 10	FTR8100	KC10	50/50 100/0 70/30	Candelilla wax Candelilla wax	O X A	O X A	O A O	A X A	A X X	O X A

The results demonstrate that a thermal transfer recording media, with an ink layer having a styrene resin/binder component ratio of greater than 50/50 produced poor results when evaluated for applicability to non-coated paper, sharpness, and rub resistance. Examples 9 and 10 which have a styrene resin/binder ratio of 50/50, demonstrated superior properties, clear printing qualities and sharp image sharpness even at the maximum printing speed (12 ips).

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Date: January 9, 2004

Toshimichi Harada
Toshimichi HARADA et al.